Ruddy Sheldrake (*Casarca rutila*). Fairly common.
Mallard (*Anas boschas*). Plentiful.
Teal (*Nettium crecca*). Plentiful.
Wigeon (*Mareca penelope*). A few seen.
Pintail (*Dafila acuta*). Fairly plentiful.
Common Pochard (*Nyroca ferina*). Plentiful.
Tufted Pochard (*Nyroca fuligula*). A few seen.
Golden-eye (*Clangula glaucion*). Fairly plentiful.
Smew (*Mergus albellus*). Only one seen.
Goosander (*Merganser castor*). Fairly common.

Only one species of Grebe was seen, and it appeared abundant in the marshes and back-waters of the Tigris from Fao to Mosul, but whether it was *Podiceps albipennis* or *P. fluviatilis* I am unable to say.

XXII.—*A Note on the Common Ringed Plover of the British Isles* (Charadrius hiaticola major *Seebohm*), *and on Coloration as a Factor in Generic Differentiation.* By Percy R. Lowe, M.B.O.U.

It is rather a remarkable fact that in spite of the exceedingly close scrutiny to which every British species has of late been subjected, with a view to detect any evidence of differentiation which may obtain between it and the corresponding forms located on the continent—the case of the Common Ringed Plover has been entirely overlooked, or perhaps, to speak more correctly, ignored.

Thus, if one refers to the latest 'Handlist of British Birds,' compiled under the joint authority of Messrs. Hartert, Jourdain, Ticehurst, and Witherby, one finds the Common Ringed Plover of the British Isles designated as *Charadrius hiaticola hiaticola* Linn., while in the synonymy of this species we get the following note:—"*Charadrius hiaticola major* Seebohm, Hist. Brit. B. iii. p. 20 (1885)—

Seebohm separated a larger race, supposed to be resident in the British Isles, but other ornithologists have not followed him, *and the status of this race remains very doubtful.*" (Italics ours.)

Considering, as we have just remarked, the almost microscopic eye which naturalists have been focusing upon other British subspecies, it is a surprising fact that the status of Seebohm's *C. hiaticola major* could possibly have been called in question, and that ornithologists should have hesitated in following his lead; for it certainly requires no microscopic eye to recognise the validity of this subspecies. It is, in fact, very easily recognisable and is, one would be inclined to think, more worthy of recognition than some other British subspecies which have lately been differentiated. For this reason, I have thought it might be useful to bring to the notice of ornithologists the following notes, which are the result of an examination of some two hundred examples of the Common Ringed Plover contained in the British Museum and other collections.

Of these specimens, more than half were rejected as being either immature, unsexed, or otherwise wanting in the data attached; while, for the purpose of comparing the differences in coloration between the insular and continental races, only those birds were selected which had been obtained during the breeding season. It will be noticed, however, that in the lists appended below I have included birds shot in August and also birds from other localities than the British Isles, this being done for the double purpose of getting an idea of the relative measurements of the two races and of demonstrating their range as far as was possible with the material available.

Unfortunately, I have not been able to examine any specimens of the typical race—*Æ. hiaticola hiaticola* L.—from the restricted typical locality (Sweden); but as specimens from Norway were included in the examples compared, I do not think this is of any material importance.

As the results of my examination, my conclusions are as follows:—There are undoubtedly two easily recognised races of the Common Ringed Plover, viz., the eastern continental or typical race, *C. h. hiaticola,* and a western continental race, *C. h. major,* whose chief habitat is the British Isles. The points of distinction between the two races are that *C. h. major* is a larger bird in almost every respect—that is to say as regards the length of the wings; the length and stoutness of the legs and feet (this on an average very noticeable); the size of the skull (the head appearing more rounded, wider, and larger); the bill (on an average); and the body generally.

As regards coloration, the upper parts of British breeding birds, as compared with birds of the typical race at a like season, are also very obviously paler, the coloration being a pale drabby brown as compared with a very noticeably deeper and more chocolate-brown.

It is to be noted, however, that *freshly moulted* (autumn) specimens of *C. h. major* are distinctly darker on the upper parts as compared with examples in summer-plumage.

To sum up, we thus have a large pale race (*C. h. major*) and a small dark race (*C. h. hiaticola*).

The range of *C. h. major*, as far as the material available enables one to say, seems to be on all fours with the range and distribution of the paler western race of the Lesser Black-backed Gull, *Larus fuscus affinis* Reinh., *cf.* 'British Birds,' vol. vi. 1913, pp. 2 and 360; that is to say, examples from Greenland, Iceland, the coasts of France, Portugal, Gibraltar, and the Canaries, which I have been able to examine, do not seem to differ from the larger and paler race of Ringed Plover which breeds in the British Isles.

Moreover, while the larger and paler western race (*C. h. major*) pushes its southerly migrations down the western coast of Africa (as far as Cape Colony), the smaller and darker eastern race would appear to favour the eastern sea-board of the African continent, the route taken being by way of the Nile Valley.

In this connection, however, a series of immature birds, collected by Mr. D. A. Bannerman in the Canaries, is somewhat contradictory, for while some undoubtedly belong to the pale western race, others seem nearer the dark eastern race.

With regard to the northerly extension of the range of these two subspecies (*C. h. major* and *Larus f. affinis*), it is interesting to reflect that the Wyville-Thomson, Faroe-Icelandic, and Icelandic-Greenland submarine ridges seem to play an important part in the direction of furnishing a well-marked migratory track for these and possibly other western subspecies to high latitudes.

Finally, we may call attention to the fact that the smaller darker continental race (*C. h. hiaticola*) is by no means uncommon in the British Isles during at least the autumn migration, and that it is not to be confused with the Lesser Ringed Plover (*C. dubius*), which is a very rare migrant to our shores, but which may be at once identified by the absence of white in the shafts of all the primaries except the first.

The following list of some of the birds examined will give a fair idea of the relative wing-measurements and distribution of the races.

Charadrius hiaticola hiaticola L.

		Wing. mm.
♀. 23 . vi . 77.	Yenesei, Siberia ...	130
♀. 9 . v . 63.	Damietta, Egypt ..	129
♀. 9 . v . 78.	Norway	126
♀. ?	Corfu	126
♀. ?	Gennesaret, Palestine	126
♀. 22 . vii . 77.	Yenesei, Siberia ...	125
♀. 16 . xi . 85.	Manda Island, B. E. Africa ...	124
♀. v . 77.	Florence	124
♀. 1 . x . 78.	Cyprus	117

Charadrius hiaticola major Seebohm.

		Wing. mm.
♀. 19 . vi . 56.	Holy Island, Northumberland.....	136
♀. iv . 66.	Dungeness, Kent .	135
♀. 4. viii . 75.	Twin Glaciers Valley, Arctic...	135
♀. v . 63.	Beadnell, Northumberland	135
♀. 24 . vi . 05.	Brancaster, Norfolk	134
♀. 21 . viii . 67.	Kingsbury	131
♀. 24 . vi . 05.	Brancaster, Norfolk	131
♀. 10 . v . 71.	Pagham Harbour, Devon	130
♀. 10 . vii . 80.	Romney Marsh, Kent.....	129
♀. 26 . iv . 72.	Gibraltar.....	127
♀. 20 . iii . 72.	Algeciras, Gibraltar (moulting wing-feathers).	

Charadrius hiaticola hiaticola L.

				Wing. mm.
♂	12 . vi . 77.	Yenesei, Siberia (moulted)		132
♂	?	Florence		129
♂	2 . vi . 75.	Petchora, N. Russia (moulted)		128
♂	19 . vi . 74.	Norway		127
♂	9 . vi . 75.	Petchora, N. Russia		126
♂	19 . vi . 74.	Norway		126
?	?	Genoa		126
♂	9 . vi . 77.	Yenesei, Siberia		125
♂	19 . vi . 74.	Norway		125
♂	17 . vi . 75.	Pustozersk, N. Russia		125
♂	17 . viii . 76.	Siberia		124
♂	1 . x . 78.	Cyprus		122
♂	17 . ii . 98.	Berbera, Somaliland		122
♂	13 . vii . 99.	Christiansund, Norway		120
?	29 . iii . 87.	Durban, Natal		116
♂	26 . iii . 71.	Damietta, Egypt		112

Charadrius hiaticola major Seebohm.

				Wing. mm.
♂	14 . vi . 56.	Warkworth, Northumberland		138
♂	6 . v . 73.	Havre, France		136
♂	v . 65.	Dungeness, Kent		135
♂	4 . v . 70.	Pagham Harbour, Devon		135
♂	14 . vi . 56.	Warkworth, Northumberland		135
♂	17 . viii . 74.	Greenland		134
♂	viii . 69.	Orkneys		132
♂	3 . viii . 97.	Hayling Island, Hants		132
♂	3 . viii . 97.	„ „		132
?	iii . 72.	Gibraltar		132
♂	24 . xii . 71.	Catala, Valencia		132
♂	iv . 66.	Dungeness, Kent		131
♂	26 . xi . 97.	Nulbourne, Hants.		131
♂	27 . i . 99.	„ „		131
♂	vii . 93.	Rykjavik, Iceland		130
♂	27 . v . 69.	Orkneys		130
?	i . 87.	Estarrêja, Portugal		130
♂	23 . viii . 01.	Nulbourne, Hants.		129
♂	28 . xii . 97.	„ „		129
♂	14 . vi . 56.	Warkworth, Northumberland		129
♂	25 . v . 68.	Loch Stenness, Orkney		127
♂	13 . viii . 75.	Havre		127
♂	27 . vi . 96.	Spitzbergen (very worn)		127
♂	vii . 93.	Rykjavik, Iceland.		127

The average length of wing of nine females of *C. h. hiaticola* is 124 mm., of sixteen males also 124 mm. The average of ten females of *C. h. major* is 132 mm., of twenty-four males 131 mm.

Coloration as a Factor in Generic Classification.

The above note on a species of that large group of Ringed Plovers, usually recognised under the generic title *Ægialitis* *, suggests another, viz., the importance of colour

* I am personally of the opinion that by the rules of nomenclature the proper generic term for this group of Plovers should be *Charadrius*, while the Golden Plover should be *Pluvialis*.

as a character in the differentiation of certain genera; for the genus *Ægialitis* presents us with an excellent example for its demonstration. In the 'Handlist of British Birds,' referred to above, the genus *Ægialitis* is lumped with the genus *Charadrius**, and in a key to the classification of British birds in the recently published 'British Bird Book' (edited by Mr. Kirkman), Mr. Pycraft has a footnote to the effect that "It is impossible without juggling with facts to recognise the genus *Ægialitis* (and others), which must be included in the genus *Charadrius*." Furthermore, Mr. Pycraft in some introductory remarks to this key gives it as his opinion that colour is a factor which should be ignored, if classification is to be framed on sound scientific lines.

During the past six months or so I have been, somewhat carefully, through the whole collection of Waders contained in the British Museum, and as a result, I am driven to the belief that colour, on the contrary, is a factor which certainly cannot be ignored in any attempt, based on sound scientific lines, to classify that very difficult group, and that the opinion expressed by Mr. Pycraft on this point, however true it may, or may not, be as regards other groups, is certainly quite fallacious as regards the Waders.

The genus *Ægialitis* is cosmopolitan, and as generally and hitherto comprehended, consists of a very natural and compact group of some twenty species, either more or less, according to the individual opinions of various writers. This compact group of species, besides possessing a common and very characteristic type of habitat (marine-littoral or lacustrine-littoral) and certain quite characteristic habits, is also very notable for the fact that there runs through the whole series of species composing it a certain definite colour-pattern, which is quite remarkable for its fixity and constancy, although many of these species inhabit more or less isolated areas and are separated by vast distances.

We may roughly sum this colour-pattern up by saying

* The authors include under this generic name such differentiated types of Plover as the Caspian, Ringed, Golden, and Killdeer Plover and the Dotterel.

that it consists of more or less well-developed and usually darkly-coloured pectoral bands ; a white band across the forehead ; a dark frontal band immediately posterior to this ; a dark loral streak ; a dark post-auricular patch ; a white nuchal collar or some slight variation of this ; and some uniform shade of pale brown, rufous brown, buff, or cinnamon defining in a very definitely circumscribed manner the top of the head. In every species, then, this type of colour-pattern is obvious. Taking the genus as a whole and ignoring the fact that it might be, and has been, split up into two or more subsidiary groups, according to the form and colour of the bill, the length, stoutness, and colour of the legs and feet, and the colour-pattern of the tail, we find that this distinctive coloration of the head and breast runs right through every member of the group with remarkably little variation in a very constant manner.

This colour-pattern is, indeed, far more fixed and constant than the form, size, or shape of the bill ; for in the bills of the various species we get an extraordinary variety of forms from the short, stout, and stumpy little bill of *Ægialitis melodus*, to the long, thin, and attenuated bill of *Æ. placidus*. Thus, in a long series of species of world-wide distribution we have a colour-pattern which is fixed, constant, and obviously more ancient than the *structural peculiarities* of the bill, or for that matter, of other parts. This colour-pattern is, therefore, obviously very characteristic of the genus *Ægialitis* (as usually understood), and if a character which is very characteristic of a genus is not a generic character, the object of this note will be well achieved if it elicits information as to what it otherwise may be.

But there is another colour-character which is quite as, if not more, important than this colour-pattern which runs through the many species of the genus *Ægialitis* in the adult condition. I refer to the *colour-pattern which is so very characteristic of the downy young* of every species, even though, as I have already stated, those species may be as widely separated in point of distribution as it is possible for species to be.

This colour-pattern of the downy young is characterised

by an extraordinary uniformity and similarity in all the species of this group which I have been able to examine*. It is, in fact, quite diagnostic, and in no genus of the true and restricted family *Charadriidæ* is it so uniform or so remarkable.

It is true that very much the same type of colour-pattern is exhibited in the downy chicks of the genus *Ochthodromus*, a shore-dwelling group which has become differentiated from the Ringed-Plover group; but this colour-pattern of the young Ochthodromine chicks can, nevertheless, be easily distinguished and has a distinct character of its own.

Shortly put, the most obvious point about the coloration of the downy young of the genus *Ægialitis* is the conspicuous white nuchal collar; and the next most obvious point is the very finely discrete and uniform "pepper and salt" coloration of the upper parts, the ground-colour of which only differs very slightly in the various species. On the top of the head this fine mottling is seen to be contained in a very distinctly defined patch bordered with white. Here, then, it is obvious that we have an ancestral type of plumage—a simple colour-pattern—which, in view of the very cosmopolitan distribution of the whole genus through which it uniformly runs, must be of great age, and from the point of view of any scientific system of classification, of great importance. Although purely a matter of coloration, this type of colour-pattern of the plumage is a phylogenetic character which cannot be ignored. It is absolutely characteristic of the genus. In no other group, comprised in the true *Charadriidæ*, do we find such a fixed and constant type of coloration, characteristic of their downy young; and this, I believe, for the simple reason that the Ringed-Plover group represents in the true *Charadriidæ the ancestral shore-living race*, from which all the other true Plover groups—most of which have now forsaken the shore, in whole or part, for high moorlands, inland plateaux, or steppes—were derived.

* Photographs of these (some five or six) to show their remarkable uniformity, would, I think, make a very instructive plate.—P. R. L.

On this factor, then, of coloration, characteristic of their downy chicks, and on this factor alone—if no others were available—it appears to me that the species of the group of Ringed-Plovers which we have been discussing, stand apart and are worthy of generic consideration.

"Without juggling with facts," we can easily recognise in it a very natural and compact group of Plovers, which is well differentiated in a variety of ways from any other group of true Plovers; and to lump it with these last—a very heterogeneous collection—seems to me to be not only quite an unscientific procedure but one which is devoid of any practical utility. It is surely a movement backwards towards the dark ages of our ornithological ignorance.

Finally, I should like to call attention to the much neglected study of the downy nestlings of the whole group of Waders—to say nothing of other groups. From the point of view of the phylogenetic relationships of the whole suborder of the Limicolæ, I am convinced that attention to this branch of study would be of the greatest possible service in reducing order out of what at present can only be called chaos; and on this point I hope to be able to offer some further observations in the near future.

XXIII.—*Notes on Molina's Pelican* (Pelecanus thagus).

By Henry O. Forbes, LL.D., M.B.O.U.

(Plate XIII.*)

Having been commissioned by the Peruvian Government to investigate certain questions relating to the birds inhabiting the Guano Islands of the Republic, I had opportunities of observing many of the species, chiefly marine, under unusually favourable circumstances, for a period of some eighteen months during 1912 and 1913. These islands extend at intervals along the coast of Peru between 6° 30′ and 17° 0′ South latitude, and are none of them situated more than a score of miles from the mainland. They are

* For explanation of the plate see p. 420.